

***Hypertherm®***

***HyDefinition***  
***HD2070/HD3070®***

**Power Supply and Manual Gas Console  
Upgrade**

**Field Service Bulletin**  
**(P/N 802450)**

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## WARNING

Turn off all power to HD2070/3070 system. Always press the power unit OFF (O) pushbutton switch and set the line disconnect switch to OFF. Lock-out and tag-out switch.

## Introduction

This field service bulletin describes how to replace the manual gas console and upgrade the HD2070 or HD3070 power supply when end-user needs to replace the manual gas console that was manufactured prior to this upgrade.

## Tools Required

#2 Phillips Head Screwdriver

7/16-inch Socket Wrench

## Upgrade Kits

The upgrade kits are listed below. The kit part number is determined by the PS/Gas Console II (1X3/3X2) control cable length. The items common to all kits are also listed below.

<u>HD2070 Kit No.</u>	<u>HD3070 Kit No.</u>
128005 - 10 ft	128012 - 10 ft
128006 - 25 ft	128013 - 25 ft
128007 - 50 ft	128014 - 50 ft
128008 - 75 ft	128015 - 75 ft
128009 - 100 ft	128016 - 100 ft
128010 - 125 ft	128017 - 125 ft
128011 - 150 ft	128018 - 150 ft

<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
041755	Control Board	1
008317	Fuse, 125 amp	1
010764	Label, fuse F4, Rev B	1
010970	Label, LED status	1
123000	Assembly, jumper	1
008197	Tool, AMP pin/socket extracting	1
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## **Upgrade Procedure**

### **Replace Gas Console**

1. Replace the old gas console with the new gas console as follows:
  - a. Disconnect the hoses, cables and leads from the old gas console.
  - b. Install the new gas console and reconnect hoses, cables and leads making sure to replace the old PS/Gas Console II (1X3/3X2) control cable with the new control cable.

### **Power Supply Upgrade**

1. Remove front and right side covers from power supply.
2. Locate Power Distribution Board 1XPC132 (041147), semiconductor fuse switch S2 (005170)/100A fuse F4 (008827) assembly on right side (fig. 1) and do the following:
  - a. Disconnect PL-3 from REC3 at Power Distribution Board. Remove the wires connected to #23 and #24 from PL3 by using pin removal tool (008197).
  - b. Remove these wires from the wiring harness which connect at semiconductor fuse switch/100A fuse assembly. Remove and discard the assembly using the 7/16-inch socket wrench.
  - c. Replace the assembly with the 125A fuse (008317) from the kit. Tighten the bolts with 120 inch/pounds of torque. Install fuse label (010764) from kit to the right side of the 125A fuse.
  - d. Remove the wires connected to #35 and #36 from PL-3 by using pin removal tool (008197).
  - e. Located above and to the right of the Power Distribution Board are four relays. Disconnect the red wire from relay CRC-A (second from right).
  - f. Untwist the red wire from the white wire back to the pin which was removed from #36 on PL-3 in step d. Clip this wire just above the pin leaving the other red wire connected to the pin.
  - g. Reinstall the wires removed from #35 and #36 (now one red wire) into #23 and #24 removed in step a as follows:
    - Install wire removed from #35 into #23
    - Install wire removed from #36 into #24
  - h. Install jumper assembly (123000) from the kit into #35 and #36 on PL3. For consistency install the pin with the two red wires into #36. Connect the last jumper end to vacant connector on relay CRC-A.
  - i. Tie-wrap all loose wire groups.
  - j. Replace right side cover.
3. Clean the STATUS indicator surface area on control panel. Remove backing and align status indicator upgrade data label (010970) over STATUS indicators and affix (fig. 2).

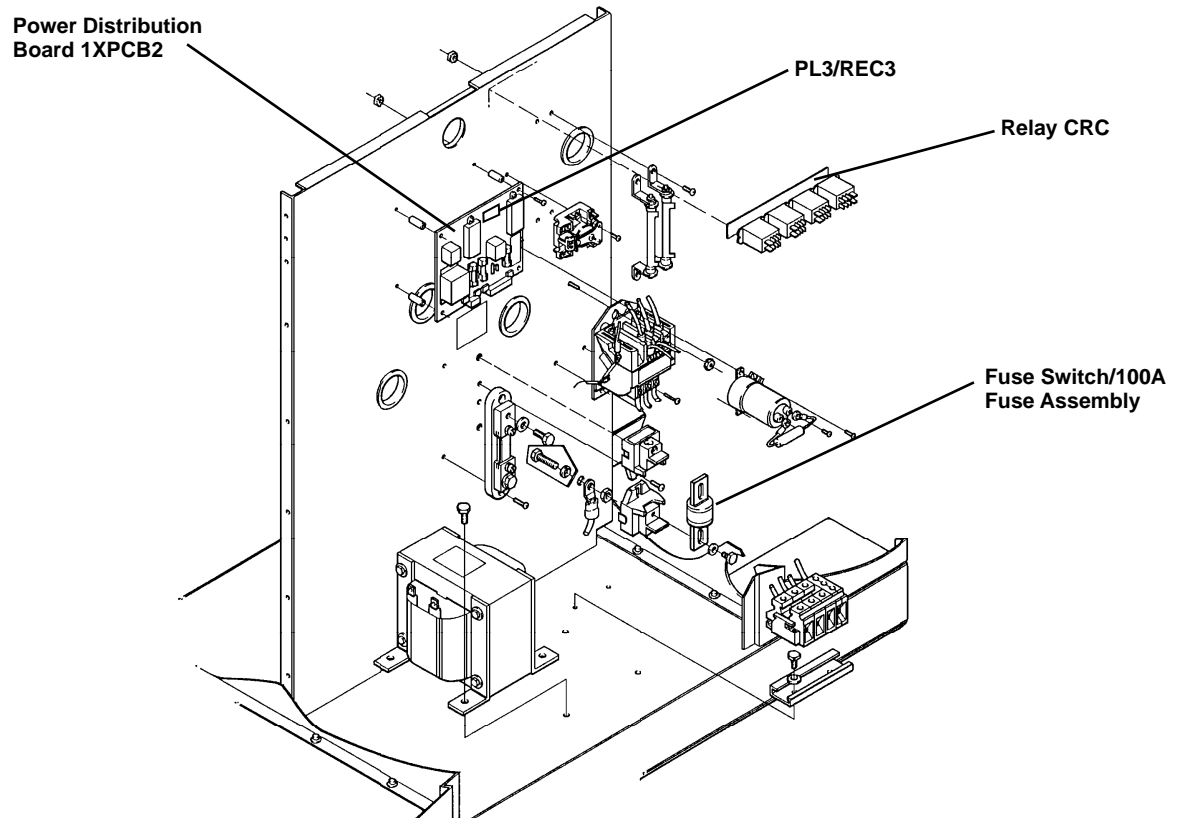


Figure 1 Power Distribution Board 1XPCB2 and PL2/REC2 Locations

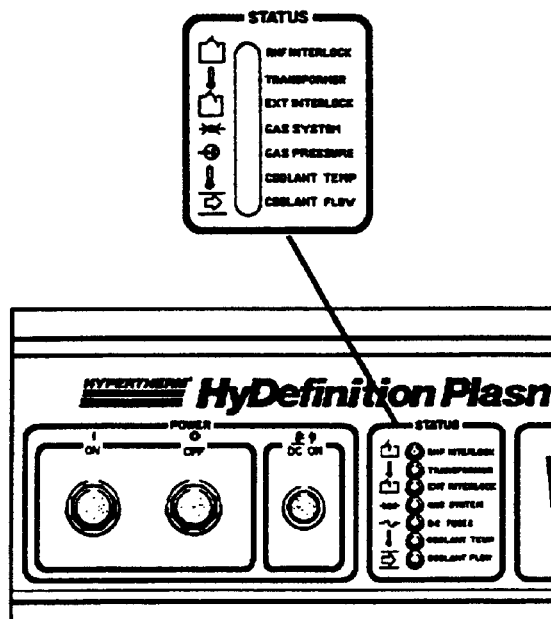
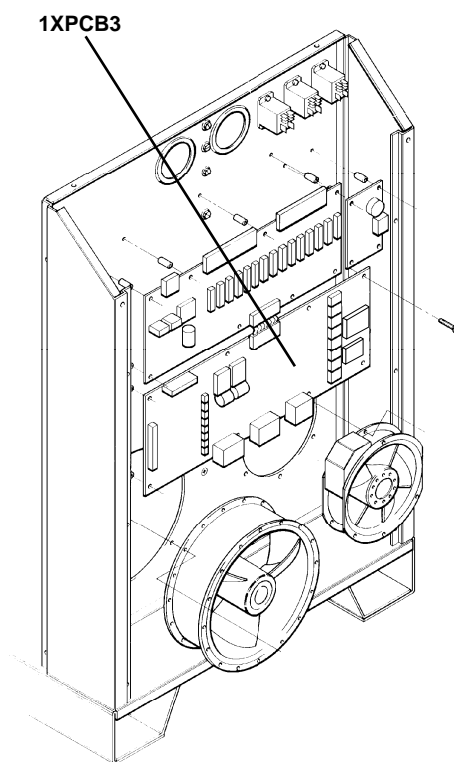


Figure 2 STATUS Indicator Upgrade Label Mounting Location

## **Install New Control Board**

1. Remove the power supply front panel by removing the six (6) screws.
2. Locate Control Board 1XPCB3 (bottom board). See figure 3.
3. Remove old control board. See figure 3.
4. Install new control board. See figure 3.
5. Reinstall front panel and secure with the six (6) screws.



**Figure 3 Control Board 1XPCB3 Location**